THE 2013 CENTENNIAL MEDALS *p.17*

STARGAZING WITH ASTRONOMY *p.22*

SUMMER 2013

# Colloquy

*The* GRADUATE SCHOOL *of* ARTS AND SCIENCES | HARVARD UNIVERSITY

# *SIGNS OF THE TIME*

Exploring the tools we've used and the stories we've told to find, keep, manage, and defy our most limited resource. *p. 12*

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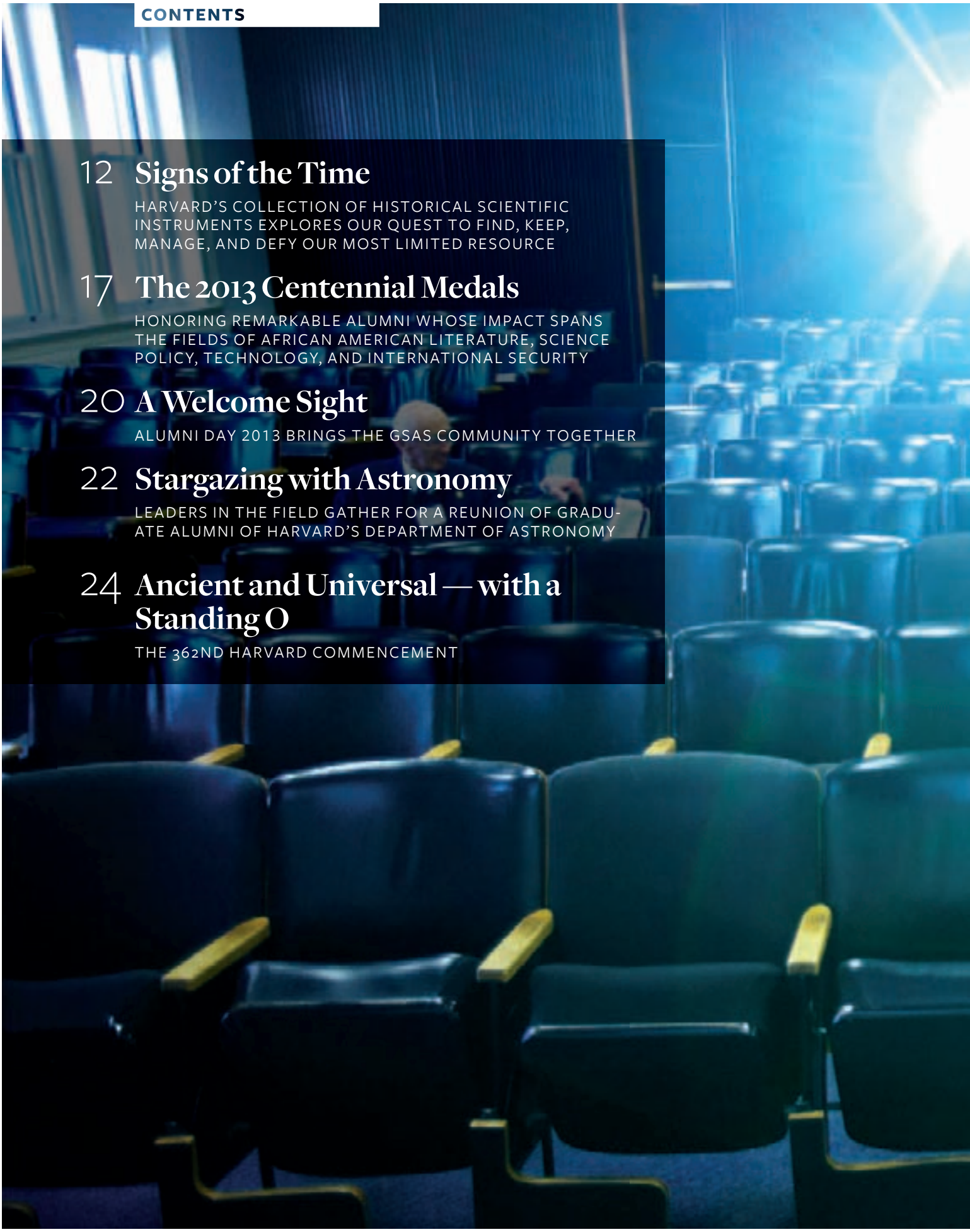



# Colloquy

An alumni publication of Harvard's Graduate School of Arts and Sciences



Cover image: A still-life montage of objects from the exhibition *Time and Time Again: How Science and Culture Shape the Past, Present, and Future,* at the Harvard Collection of Historical Scientific Instruments. The objects — each of which tells a story about measurements of time — are assembled in front of a cross section of Eastern hemlock (Tsuga canadensis), Arnold Arboretum, Boston, 2012, Harvard University Herbaria.

*From left:* Gallus domesticus, Museum of Comparative Zoology, Harvard University; inclining sundial with case, Matthew Berge, London, ca. 1810, Collection of Historical Scientific Instruments; Si'o Sa´lako Katsina, Hopi, Arizona, pre-1892, Peabody Museum of Archaeology and Ethnology, Harvard University; hunting case pocket watch with chain and fob, Edouard Richard, Le Locle, Switzerland, ca. 1885, Collection of Historical Scientific Instruments; and sand glass with fractionated ampoule, French, mid-18th century, Collection of Historical Scientific Instruments.

Photography by Bruce Peterson

Facing image: A quiet moment before the keynote address, Alumni Day 2013.

Photograph by Kent Dayton

# Colloquy



## CONTRIBUTORS

**Kent Dayton**, who took pictures at Alumni Day and the reunion of the Department of Astronomy, has a wide-ranging style and a broad portfolio of work, for clients including the Boston Ballet, the *Boston Globe*, Fidelity Investments, the Isabella Stewart Gardner Museum, Ford Motor Company, IDEO, Reebok, and Tufts University.

**Elisabeth Moch**, who illustrated portraits of the 2013 Centennial Medal winners, contributes to international publications such as the *New York Times* and *Esquire*, as well as to Swedish fashion labels Acne and Minimarket. She has drawn on the terrace of a colonial villa in China, in the State Library of Victoria in Melbourne, in various crammed cafés in New York City, and under the eucalyptus trees in Sri Lanka. She now works from a studio in Berlin.

**Bruce Peterson**, who shot the still-life photography that accompanies our cover story, specializes in artistic interpretations of conceptual advertising and product photography. He has made photographs for many local and national advertising and corporate clients. Editorial clients include *Time*, *Atlantic Monthly*, *The New Republic*, *AARP*, *Boston Magazine*, *Harvard Business Review*, *Technology Review* and *Architect*.

**Martha Stewart**, who has shot photos on Commencement Day for more than a decade, is a regular presence on the Harvard campus, shooting events and people at the Law School, the Kennedy School, and GSAS. She enjoys the process of personalizing Harvard, telling the stories of the people who make the institution run, and she specializes in putting them at ease in settings where they may not typically feel that way.

# celebrating success

Having finished my first year as Dean of GSAS, presiding over a festive Commencement season, I am spending the quieter days of summer reflecting on what I learned (a lot), what I still don't know (much more), what we accomplished, and what lies ahead.

The year was filled with discovery — and not just the discovery of how much I dislike 8 a.m. meetings, which are endemic to a dean's existence. No, it was a more inspiring kind of discovery, an appreciation — beyond what I was able to glean as chair of a premier but relatively small department like Statistics — of just how talented, inquisitive, and boundary-breaking our students are. Across the vastness of the 57 degree programs that GSAS offers, those are the qualities common to our students.

Nowhere was this more evident than in a project called Harvard Horizons, which we launched midway through the year to draw connections between those disparate programs and to recognize the achievements of leading students. The project was conceived by a fellow GSAS alum, Shigehisa Kuriyama, AB '77, PhD '86, Reischauer Institute Professor of Cultural History. When we first discussed it, we saw it as a professional development exercise, allowing students to learn essential oral and multimedia communication skills and network with peers. But we soon realized that this would be a chance to spotlight the ideas and innovations of PhD students at Harvard in a way that would serve multiple goals and reach broader audiences — University leadership, alumni, prospective students, potential employers, and funding agencies.

As you'll read on the next page, we invited PhD students to submit their most essential research idea, in the form of 500-word synopses of their work and 1-minite videos of themselves presenting it. Letters from their faculty mentors accompanied the applications. We weren't sure what kind of response we'd get, particularly since the idea was executed with a short deadline that demanded a quick turnaround.

Xiao-Li Meng, PhD '90, Dean, Graduate School of Arts and Sciences, Whipple V. N. Jones Professor of Statistics

On stage at Sanders, presenting their work to faculty, alumni, and friends, the students simply shined.

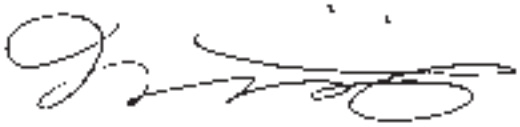
But as it turned out we received 55 extremely strong applications, making the job of the faculty committee that ultimately chose the eight inaugural Horizon Scholars both exciting and difficult.

We put together an in-depth series of mentoring opportunities, including voice coaching and visual presentation tutorials. It was affirming to see the eagerness with which the students grabbed at the opportunities, which required a considerable investment of time and effort.

The payoff was clear: When the initiative culminated in early May, with a symposium in Sanders Theatre for University leaders, faculty, alumni, and friends, the students simply shined. See for yourself; videos of their five-minute talks will be posted at www.gsas.harvard.edu/harvardhorizons.

These eight Horizon Scholars are emblematic of the extraordinary achievements of Harvard's PhD programs on a broad scale. As I embark on my second year as Dean, Harvard Horizons will be one of several ongoing initiatives to make sure that these achievements are well understood and prominently celebrated.

Enhancing the stature of the Graduate School is not an end of its own, however; showcasing new knowledge at its birthplace is essential if we are to win critical arguments for federal support of research education or about the link between education and economic growth. But most important, it is a way that we can position our graduate students to compete at the highest levels for the very best positions, whether in academia, the public sector, or private industry. At this time of year, as we send another cohort of students off into the world, confident in their ability to change it for the better, I'm mindful of that imperative above all.



MARTHA STEWART

# The Elevator Speech, with Substance

**Harvard Horizons showcases the research strengths of Harvard's PhD community**

Harvard Horizons, an initiative to promote the ideas and innovations of PhD students at Harvard, culminated in an afternoon of celebration on May 6, when eight selected scholars presented short, dynamic talks to a full house at Sanders Theatre.

Harvard Horizons was conceived as a professional development opportunity by Shigehisa Kuriyama, Reischauer Institute Professor of Cultural History, and GSAS Dean Xiao-Li Meng. In January, they invited PhD students to apply by submitting an essay and a video describing their most essential research idea, along with an endorsement from their advisor.

A cross-disciplinary faculty committee, including members of the GSAS Graduate Policy Committee, reviewed 55 applications and selected 15 semi-finalists for a round of interviews, after which the committee met to choose the eight students designated as Horizon Scholars.

This spring, these scholars received in-depth mentoring by faculty and experts from the Derek Bok Center for Teaching and Learning, enriching their professional development and preparing them to present their research to a broad audience, TED-style.

And that's where the initiative fills a particularly important role, Meng told the *Harvard Gazette*, and why he wants to ensure that more graduate students receive the benefit of such training. "Regardless of what your career may be — some of these students may become professors, and others may go into business or government — communication is a skill that is absolutely critical," he said. "If you look at how society is evolving, we're all multitasking, everyone's attention span is getting shorter. In addition to possessing deep expertise in their field of study, our students need to be able to deliver an elevator speech, and that's a skill that has not traditionally been emphasized. They need to be able to talk with a variety of audiences, across a variety of disciplines, about what they do and why it's important."

*Get to know the inaugural Horizon Scholars here, and watch videos of their talks at www.gsas.edu/harvardhorizons. Profiles by Cassandra Nelson.*

## FENNA KRIENEN

PSYCHOLOGY

**"Big Brain Science: Strategies for Mapping the Human Brain"**

When it comes to unlocking the secrets of the brain, there is strength in numbers, as Fenna Krienen's work on the human connectome shows. Connectomics — a word and concept modeled on genomics — represents a new kind of cartography, an attempt to trace connections between neurons in the brain.

The scope of the project is massive. "To set the stage," says Krienen, "you have 100 billion neurons, and trillions of connections." Even the most advanced computers can't model such a complex neural network directly. Instead, "every one of the pixels in our images is pooling data over thousands or tens of thousands of neurons," she says. The data are further simplified by computational tools that look for consistent patterns of activity across participants over a large sample size. Traditionally, neuroimaging studies of the human brain relied on between 12 and 30 subjects at a time, Krienen says; her lab is looking at thousands of brains at once, trying to learn how neural networks form and break down with age or disease.

She's inspired by the idea that her lab's work has the potential to upend the long-held assumption "that the human brain is either just a bigger version of a small brain, or is basically the same as other primate brains." Preliminary results indicate that this might not be the case. "There is a difference not just in scale," Krienen says, "but also in organization of what's new. What is expanded is not just more of the same."

## HANSUN HSIUNG

EAST ASIAN LANGUAGES & CIVILIZATIONS

**"Textbook Enlightenment: Europe, Japan, and the Rise of Global Distance Learning, 1720–1877"**

Among the skills useful to scholars conducting archival research is an ability to recognize serendipitous opportunities when they come. When Hansun Hsiung first scoured the archives of the Tokugawa shogunate that ruled Japan from 1600 to 1868, he was disappointed to find that much of the collection consisted of inexpensive textbooks produced for European markets.

"At first it seemed as if they wouldn't be worth intellectual consideration," he says. But on subsequent trips to the British Library, the University of Reading, and Kew Gardens in England, Hsiung picked up the textbook thread again.

Among other material, he found India Office records of agreements with publishers, and documents voicing concerns about which books would be appropriate to use abroad. "I began to think that looking at this type of cheap pedagogical literature could tell a larger story about how it is that European knowledge circulates," says Hsiung.

Part of that story is a shift in the mid-19th century from texts produced for a national market — French textbooks designed for French schoolchildren — to texts produced for colonial areas. In a project with clear relevance for the current revolution in how information is transferred across institutional and national lines, Hsiung wants to explore exactly what happens "when these decontextualized texts move into very radical, very new contexts."

BEN GEBO

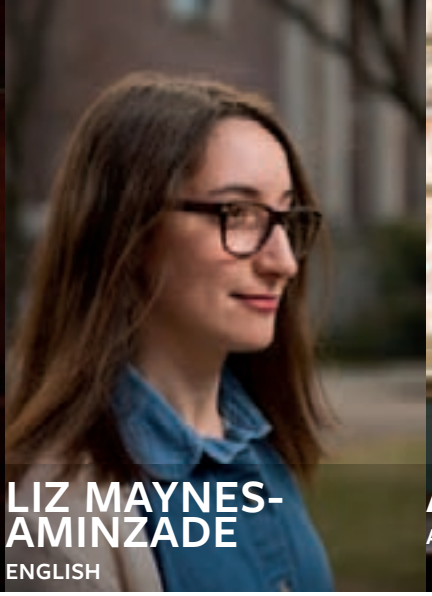
## JEFF TEIGLER
DIVISION OF MEDICAL SCIENCES

**"Building Better Vaccines by Learning the Language of the Immune System"**

Jeff Teigler has long been fascinated by the interface between virology and immunology. He initially came to Harvard to try to understand how viruses such as SARS and bird flu cross the species barrier to infect humans, and why some people become symptomatic while others don't. "How does the immune system respond to one virus versus another versus another?" he wondered. "I was interested in the interaction between how the body immediately responds and what the virus looks like in order to get that kind of a response."

As Teigler shifted to focus on vaccines against HIV, he looked specifically at the role of viral vectors — viruses that have been modified so that they will not attack a cell and cannot replicate — in vaccine delivery. "The reason viral vectors are powerful is that your body is predisposed to attack bacteria, viruses, and other things," he says. "So if you package whatever you want your body to attack in a virus, that will stimulate your immune system to attack it much more strongly than if you just put in a small piece of a target on its own."

Teigler's research indicates that viral vectors, long thought to be passive shuttles, are in fact "active in the process of determining what type of immune response you'll get back out," he says. They provide researchers with an entirely new toolbox for vaccine development — one Teigler is eager to explore.



## LIZ MAYNES-AMINZADE
ENGLISH

**"Macrorealism: How Fiction Can Help Us Understand a Networked World"**

Around the time that Liz Maynes-Aminzade was crafting a prospectus for her dissertation on 19th-century British literature, the last season of *The Wire* had just finished ushering in a new golden age of television on HBO. And she was hooked.

"I watched all five seasons in two weeks and started reading a lot of criticism and journalism about the show," says Maynes-Aminzade. "Very quickly it became a critical commonplace to compare the show to either Dickens specifically or the Victorian novel more generally."

Thinking about the connections between these disparate genres and works has led to new insights into the formal elements of the Victorian narrative mode she calls "macrorealism," as well as to a consideration of why macrorealism has experienced a recent resurgence.

"Ultimately, I attribute this phenomenon to an ethical anxiety that we share with the Victorians," she says. "Namely, the fear that as the globe becomes more thoroughly interconnected, and as the division of labor becomes increasingly complex, we as individuals often become complicit — without even realizing it — in ethically dubious enterprises." Macrorealism attempts to counter this by forcing readers and viewers to see the big picture — to trace connections and understand how their actions can affect people far away and sight unseen in a complex, global society.

## AARON KUAN
APPLIED PHYSICS

**"Graphene Nanopores for Single-Molecule DNA Sequencing"**

Ten years after the completion of the Human Genome Project, says Aaron Kuan, the real promise of genomics — personalized medicine based on an individual's unique DNA makeup — has yet to be fulfilled.

"When people think of sequencing, they sometimes think you can run your genome through a machine, get the whole sequence, and understand everything," he says. "But that's not happening yet. We don't have enough sequencing power to fully understand what's going on."

Kuan hopes that his own work will help produce a method of single-molecule DNA sequencing that is reliable, quick, and cheap, for use on-site in clinics and hospitals. He is focusing on nanopore sequencing, in which DNA is threaded through a hole small enough to be measured in nanometers (a billionth of a meter). Nanopore sequencing based on biological pores — genetically engineered from bacteria and bacteriophages — has led the field so far, but Kuan thinks that solid state sequencing techniques, in which nanopores are manufactured from silicon wafers, graphene, and other materials, may be more promising.

"While you always want to understand how something can work," he says, "the question becomes, how can I optimize it? How can I make this the most reliable, most tunable, cheapest kind of technology? If we want to make technology that can be mass-produced, we're going to want to base it on solid state nanotechnology."

Learn more and engage. Videos of each scholar's talk are posted at www.gsas.harvard.edu/harvardhorizons.

## ALEX FATTAL
**ANTHROPOLOGY**

**"Guerrilla Marketing: Information War and the Demobilization of FARC Rebels"**

When a Fulbright scholarship brought Alex Fattal to Bogotá, Colombia, after college, he founded a nonprofit organization to teach photography to children affected by the armed conflict between the government and guerrilla groups such as the FARC and ELN.

"These were young people who had been displaced or were living in very precarious conditions, and who were at risk of recruitment from armed groups," says Fattal. "We wanted to give them the tools of representation."

But he sensed that wider coverage of the crisis "was not helping further understanding of the war, and was not helping to resolve the conflict." So when he returned to Colombia to do fieldwork for his PhD, he approached the intersection of media and politics in a new way. He began studying the Colombian government's demobilization efforts, which are centered in part on strategies of persuasion, often in the form of ad campaigns produced with the help of a public relations firm.

It was clear from the start that media is a crucial part of the demobilization attempts, but Fattal's project takes a wide view. "Rather than cordon off production from circulation and reception," he wants to track all three parts of the process in order to understand "what promises are being made to the demobilized, how the demobilized understand those promises, and how they experience the transition to civilian life."

## STEPHANIE DICK
**HISTORY OF SCIENCE**

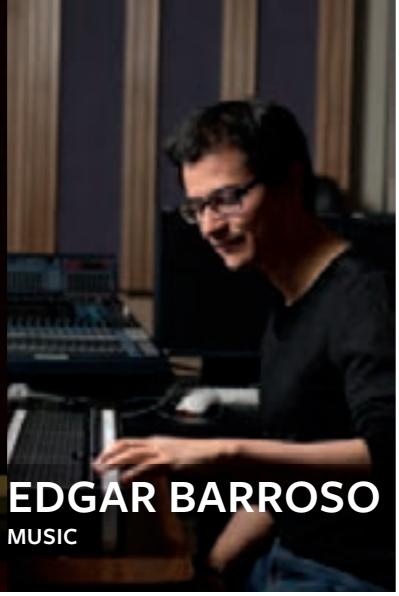
**"Aftermath: Following Mathematics into the Digital"**

For Stephanie Dick, the path to a dissertation on the history of mathematics and computing began, unexpectedly, with the *Epic of Gilgamesh*. As an undergraduate, she was convinced she wanted to study political science and become a lawyer, until a freshman humanities course changed her mind and set her down a path toward intellectual history.

Going through the papers in which Einstein worked out his theory of relativity as an undergraduate, she says, "I had this moment where I was thinking that equations that are supposed to describe physical systems have a different ontological status than equations in mathematics. $E=mc^2$ is a different kind of thing than $2+2=4$.

"I don't actually know if I think that any more," Dick adds. "But that was definitely when I became very interested in how mathematics gets made — how mathematical knowledge gets stabilized and circulated."

Mathematics has a distinguished place in intellectual history, says Dick, but the introduction of computing has opened up parts of that history for debate. "Computers bring an empirical, experimental, and very material presence" to mathematics, she says. Even "low-level material transformations of things like sets" — how they are represented for mathematicians on paper versus in the memory devices of mainframe computers — can have wide-ranging implications for "higher-level concerns about certainty, proof, and what gets to count as mathematical knowledge."



## EDGAR BARROSO
**MUSIC**

**"Enhancing Music, Social, and Entrepreneurial Innovation through Trans-Disciplinary Collaboration"**

His parents' and teachers' well-intentioned encouragement to decide on a specific field early in his studies had the opposite effect on composer Edgar Barroso. When he arrived at Harvard in 2007, with a BA in music composition from Guanajuato University in Mexico and an MA in digital art from Barcelona's Pompeu Fabra University, Barroso audited classes in as many different fields as time would allow. He was looking for ways to infuse his PhD studies with the open source, cooperative ethos that had characterized his time in Spain. Ultimately, a process of collaborative composition with scholars in other disciplines provided a way to have it all.

"The beautiful thing about music is that I found everything I wanted in it," Barroso says. "Music has math; it has science; it has emotion. It has a lot of psychological elements to explore."

Recent collaborations have produced original compositions on subjects includaing tai-chi and ataraxia, the ancient Greek word for "tranquility"; tango and the art of Joan Miró; the often baffling nature of English pronunciation; the expansion of outer space; Ovid's *Metamorphoses*; and the unintended consequences of social media. These musical meditations, some of which incorporate words and images as well as sound, have the flavor of Montaigne's *Essays*: each represents Barroso's attempt to get at a new truth about the matter at hand.

# You're teaching. Are they learning?

With funding from a Sloan Foundation grant from the Council of Graduate Schools, GSAS has launched an initiative to explore new ways of assessing teaching and learning in an era of rapidly changing classroom experiences.

The grant is dedicated to finding innovative, proof-based answers to questions as old as education itself: Are my students actually learning? How can I tell?

With emerging pedagogical trends — everything from project-centered learning to multimedia assignments to MOOCs — further muddying the often-opaque waters of student assessment, new tools and techniques have become essential. But it's not only teaching that has changed; students are accessing information and knowledge in dramatically new and autonomous ways.

The initiative to explore all this was unveiled in May, when GSAS Dean Xiao-Li Meng hosted a retreat for a group of pedagogically engaged faculty, students, and postdocs. It was a cross-University effort, organized with help from GSAS assistant dean Sheila Thomas, John Girash from the Derek Bok Center for Teaching and Learning, and Johanna Gutlerner from Harvard Medical School. The goal was to share best practices and make connections across Harvard that would foster new collaboration and encourage better training for current graduate students. Attendees took part in discussions and case studies oriented around five broad questions: What do I want my students to learn? What's the evidence that my teaching is effective? What can we learn from student evaluations? How can we evaluate 40,000-plus students (which detailed the experiences of David Malan, AB '99, PhD '07, the driving force behind CS50, a popular computer science course now offered through HarvardX), and, finally, How can I know that my teaching has lasting impact?

Meng plans to build on the fruitful conversation of that day by creating additional opportunities for cross-school dialogue, both among current faculty leaders and among the faculty of the future. — *Bari Walsh*

CS50's David Malan


# HUMANITIES UNBOUND

After 18 months of effort, a committee of scholars from within the Faculty of Arts and Sciences has released a set of three ambitious reports (artsandhumanities.fas.harvard.edu/humanities-project) on teaching and learning in the arts and humanities at Harvard. The centerpiece, "Mapping the Future," is a 70-page analysis of what the trends are, what the stakes are, and what steps the future requires.

In sum, the trend is downward for undergraduates concentrating in the arts and humanities. The stakes are high for beleaguered departments. And the action steps are plain: more attention to freshmen exploring concentrations, broader courses, and more cross-discipline collaboration.

"We really want to be present," said Arts and Humanities Dean Diana Sorensen, "not just as a signpost but as a practice."

The three reports were inspired in early 2012 by a request from Sorensen. "Mapping the Future" focused on the philosophical underpinnings of the humanities, its present state at Harvard College, and its aspirations.

A second, the Curriculum Working Group Mission Statement, took on curricular reform and announced a first step: a series of "gateway" courses to be offered in the General Education Program in the fall: intentional, focused invitations to experience the arts and humanities.

A third report, "A View from the Mahindra Humanities Center," characterized that center as an intellectual crossroads, a place where the integrative spirit of the humanities is already playing out (though largely for faculty, postdoctoral fellows, and graduate students). Its author was Center Director Homi K. Bhabha, Anne F. Rothenberg Professor of the Humanities, who called for gateway courses that "audaciously cross disciplinary hubs" at Harvard.

The first curricular step in what Sorensen calls the Humanities Project, those gateway undergraduate courses coming this fall, involved graduate students in essential ways. The courses were incubated this spring in a series of three Graduate Seminars in General Education — a "collective venture" among faculty and graduate students to make "humanistic knowledge central to the liberal arts of the 21st century," according to course descriptions provided by Sorensen and Bhabha.

Those graduate seminars — The Art of Reading, taught by Bhabha, the Art of Listening (taught by John Hamilton in Comparative Literature and Alexander Rehding in Music), and The Art of Looking, taught by Robin Kelsey and Jennifer Roberts in the History of Art and Architecture — represented "a unique opportunity for graduate students to consider critically — and to rethink — the entire curriculum in the humanities." — *Corydon Ireland, excerpted and adapted from the Harvard Gazette*

Diana Sorensen, at right, with Laura Malisheski at a digital humanities forum last spring.

# Q+A Jessica Stern

**Exploring the roots of terrorism, a scholar confronts its presence in her own life**

Jessica Stern has been thinking and writing about terrorists and their motivations for more than 25 years, becoming a leading investigator of the causes and effects of war, trauma, and violence. Her work has always taken risks (including risks to her own safety), offering insights that go deeper than objective fact-finding. For her 2004 book *Terror in the Name of God*, she traveled the world to interview religious extremists on their own turf, a practice she has continued in a current project that has her interviewing war criminals. In 2001's *The Ultimate Terrorists*, she explored the fearful consequences of stateless terrorists gaining control of biological, chemical, and nuclear weapons. But it wasn't until she published *Denial: A Memoir of Terror* in 2010 that she fully probed the origins of her fascination with the subject. She wrote of how she and her sister were raped as teenagers, in the living room of their home in the small, affluent town of Concord, Massachusetts, and of how that crime helped engender an ability to withstand the feelings of fear her fieldwork often raised. As a result of her inquiries, the police reopened and solved the 35-year-old case, discovering that the perpetrator had raped at least 44 other girls in the Boston area, many near the Harvard campus. Now a fellow at the School of Public Health and a member of the Hoover Institution's Task Force on National Security and Law, Stern is continuing her exploration of the inner and outer manifestations of trauma as an advanced academic candidate at the Massachusetts Institute of Psychoanalysis.

## Q+A ID

NAME:
**Jessica Stern, PhD '92**

FIELD OF STUDY:
**Public Policy**

TODAY:
**Fellow at Harvard's FXB Center for Health and Human Rights**

**Describe a memorable encounter with a terrorist.**

The most surprising interview I ever did was with a man named Fazlur Rehman Khalil, in Pakistan. He was the leader of a group called Harkat ul Mujahideen, affiliated with al Qaeda. I'd been trying to interview him for years, and he finally agreed to speak with me in 2000. After Bin Laden was killed in 2011, when officials examined his phone, they discovered that the last phone call bin Laden made was to Khalil.

As was often the case in these interviews, Khalil started out with a story that could have been written by a PR company for terrorists. He told me that his organization had no training camps in Afghanistan, that if Afghanistan were to shut down terrorist training camps that would be a good thing, if such camps even existed. I let him ramble on, assuming that he had been briefed by Pakistan's intelligence agency, the ISI, about what he should say to me. But I wanted to find a way to get him off the PR track he was stuck on. I just had this thought — I should ask him about his wife.

He told me that his first wife was living with his parents, but that he had a new wife, and she was living in Islamabad, not far from where we were meeting. And so I asked if I could meet her. He was obviously taken aback; he hadn't been prepared for that question. And he said yes.

At the beginning of the conversation, I'd had the feeling that I often have in talking to terrorists — that part of what's going on is theater, and that they were deliberately trying to make me feel frightened. But once the subject of his wife came up, everything changed. I think he was proud of her,

WRITER
Bari Walsh

ILLUSTRATOR
Tina Berning



wanted to show her off to an American.

We walked over to his house, a giant mansion, and I was able to speak privately with Khalil's wife. She was quite a bit younger than he, and absolutely gorgeous. And suddenly, instead of being served tea with disgusting buffalo milk in filthy teacups, I was offered mangos and Coca Cola from a refrigerator. She spoke perfect English. They had met in Saudi Arabia, where he had been on a fundraising mission. He also told me that he did fundraising in Iran, which was very surprising at the time, because his group worked with anti-Shia groups.

So I was able to find a topic where I could get to a truth — the truth that jihad was making this man rich, and that both Saudi Arabia and Iran were funding his organization. Later, I would meet a young man who had left Khalil's organization because he had realized that his boss was making a lot of money off of jihad. This was a surprise to me, the extent to which jihad can be a moneymaking enterprise, and how money could be a motivation for some terrorists.

**When you meet with people like him, do you have to engage in that same theater? Do you feel like you're dancing in some way?**

I am dancing, but I wouldn't call it theater. Interviewing terrorists in the field, I was really scared, but at the time I didn't perceive my agitation as fear, but as curiosity. Now I understand that I was disassociating, which, ironically, can be very useful in an interview with a dangerous person.

**Do they think that you're going to serve in some way as their biographer?**

I think no one would talk to me if they didn't think I was going to explain their perspective. Some of them hope I'll make them famous. And I *want* to explain their perspective. It doesn't mean I won't incorporate other perspectives. But I have a practice of allowing the interviewee to correct any "mistakes" I might make. When I was writing about Lashkar-e-Taiba, a group that became known in the West after the Mumbai bombings, I wrote that Lashkar got funding from Al Qaeda. Lashkar told me this was wrong. So I put Lashkar's "correction" in a footnote — fine.

**So, trust gets built that way?**

I'm not trying to trick them. They have a story to tell. If I know they are lying, I tell the reader; but much of what they say reflects their opinion about world events or stories from their personal lives. I let them tell their story, and then I add whatever facts I can find, to put their story into context. I want the reader to form her own judgment.

**What can you say about the big question of why someone becomes a terrorist?**

There are risk factors at many levels — international relations, domestic politics, even demographics. The part of the picture that I'm interested in is the personal part. There are many cases where one brother becomes a terrorist and another becomes a doctor. Those two brothers were subjected to the same political environments, and yet, only one of them feels so aggrieved that he becomes a criminal.

Some people like to kill. At the other end of the spectrum are people who would never kill a noncombatant, no matter how oppressive the ruling regime. Most of the terrorists I've talked to fall somewhere in between. Their motivations are partly personal and partly ideological. What makes one person find the terrorists' narrative so compelling that he is willing to target innocent noncombatants, which is counter to every religious tradition?

**Do we know?**

There are different pathways. We know that sometimes individuals are pulled in by their friends. Sometimes, as in the case of some neo-Nazis, they're attracted by the music, and don't really even understand the ideology until they're fully brought into the group. Sometimes it's a severe trauma that pushes them over the edge. And sometimes they're bought — either the parents are paid for the "donation" of their children, or the recruits are offered a job, sometimes a high-paying job. So there are many different incentives. And the ideology is just one of those.

"This was a surprise to me, the extent to which jihad can be a moneymaking enterprise, and how money could be a motivation for some terrorists."

**Has your own traumatic experience given you insights?**

I think what it's done is made me sensitive to the notion that a person might have had a personal experience of humiliation that makes him vulnerable to al Qaeda's narrative that the West is determined to humiliate Muslims and to insult Islam. It's interesting that Ayman al-Zawahiri, the leader of al Qaeda and the architect of this narrative, was tortured and raped in prison in Egypt. It is also interesting that rape of little boys is so common in Afghanistan, and that sexual abuse of boys by clergy is a problem at the same extremist madrassas in Pakistan that are known in the West as factories for jihad. I had known about this sexual abuse for nearly a decade, but I didn't see any possible link with terrorism. Now I wonder if perhaps there might be a link. But I don't want to make it sound like sexual humiliation is the answer. It's just one possible risk factor. What I do know is this: There has to be a reason that some individuals find that narrative of humiliation so compelling and others don't.

After all these years, I've developed a bizarre expertise: I know how to interview perpetrators. A lot of people can't bear that. I can't bear interviewing victims. That's much harder for me.

REVIEWER
James Clyde Sellman, PhD '93, history

# Shelf Life




In 1940, the choice between Great Britain and Nazi Germany couldn't have been more stark. But **John Beck** (PhD '89, business studies) maintains that such situations are rare. In ***Good vs. Good*** (North Star Books, 2013), he proposes a systematic approach for reconciling conflicts that involve not so much "good vs. evil" as competing "goods." Drawing on his own interview- and questionnaire-based research and on findings from various social sciences (and neuroscience), Beck proposes eight basic categories for these overarching goods: life, relationships, growth (mainly understood in economic terms), individuality, joy, belief, equality, and stability. He applies his model using political, organizational, and personal examples, concluding that we need a structured approach to complex decision making.

In ***Obama and America's Political Future*** (Harvard University Press, 2012), **Theda Skocpol** (PhD '75, sociology) seeks to understand how — facing the most severe economic crisis since the Great Depression — President Barack Obama, his Congressional Republican opposition, and the Tea Party movement could produce such political gridlock. And Skocpol, the Victor S. Thomas Professor of Government and Sociology at Harvard, pulls no punches. In her short, compelling analysis, published before the 2012 election, she is blunt in assessing Washington's response to the recession: "The record shows that early twenty-first-century Republicans have been unwilling to allow an elected Democratic president of the United States to govern amid a major national emergency."

In ***Reading for the Body: The Recalcitrant Materiality of Southern Fiction, 1893–1985*** (University of Georgia Press, 2012), **Jay Watson** (PhD '89, English) explores the use of the body as metaphor and source of meaning. By interrogating texts familiar (Twain, Faulkner, Richard Wright, and Walker Percy) and novel (for example, Booker T. Washington's "Atlanta compromise" speech and Bobbie Ann Mason's *In Country*), Watson demonstrates the significance of the corporeal in Southern literature. At the same time, he grounds this bodily imagery in race and gender, exemplified by his discussion of "Portrait in Georgia," from Jean Toomer's *Cane* (1923), which uses the chilling imagery of lynching to describe a white woman.

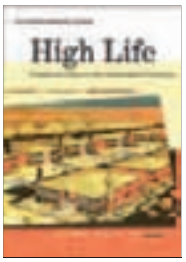
**Deborah Beck** (PhD '97, classics) uses narratology (the study of narrative structure, themes, and conventions) to reevaluate the *Iliad* and *Odyssey*. In ***Speech Presentation in Homeric Epic*** (University of Texas Press, 2012), she identifies distinctive yet overlapping ways by which these works convey information — and draws two main conclusions. First, the consistent spectrum of strategies employed in the treatment of speech (e.g., direct quotation, lively paraphrase, or more distant, indirect references) suggests that the *Iliad* and *Odyssey* reflect a single "implied author" (not necessarily one person). Second, since these epics can be interpreted using modern literary and linguistic analysis, they represent less a precursor to modern literature than an intrinsic part of its first flowering.

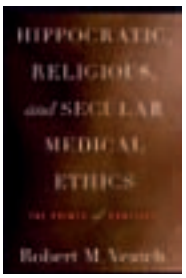
***Prescribed: Writing, Filling, Using, and Abusing the Prescription in Modern America*** (Johns Hopkins University Press, 2012) has a far broader purview than its title would suggest. This essay collection locates the prescription within the context of the pharmaceutical industry and modern medical practice, dominated by prescription-only, brand-name medications. The essays also explore political, legislative, and lobbying efforts — and how industry, government, and consumer activists have constricted the physician's professional autonomy. In her essay, **Elizabeth Siegel Watkins** (PhD '96, history of science) takes the unusual step of including pharmacists along with doctors and patients in her analysis. And volume editors Watkins and **Jeremy Greene** (MD '01, PhD '05, history of science) provide an exceptionally thoughtful introduction.

***Free and French in the Caribbean*** (Indiana University Press, 2013) examines the legacy of Toussaint Louverture (1743–1803) and Aimé Césaire (1913–2008), key figures in the decolonization of the Caribbean. They lived over a century apart, and operated in different contexts, but **John Patrick Walsh** (PhD '05, romance languages and literature) sees important parallels in their struggles. Louverture confronted colonialism and racism by demanding "*liberté, egalité, fraternité*" for Haitian slaves no less than for French *citoyens*. Césaire, a key voice of the *négritude* literary movement, highlighted the Caribbean's enduring African heritage. Yet each man's actions complicated his legacy: Louverture's Haitian constitution was strikingly authoritarian — even providing for the possible reintroduction of slavery. And Césaire negotiated the transition from colonial to "departmental" status for France's Caribbean colonies, further postponing their independence.

In studies of American community life, **Matthew Gordon Lasner** (PhD '07, urban planning) writes, one category

Alumni authors: Would you like your book (general interest, published within the past year) considered for inclusion? Send it to *Colloquy*, Harvard Graduate School of Arts and Sciences, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, MA 02138. Questions? E-mail gsaa@fas.harvard.edu.





of residences is often overlooked. ***High Life: Condo Living in the Suburban Century*** (Yale University Press, 2012) aims to fill that gap by telling the story of collectively owned residences (condos, co-ops, etc.) from their first appearance after the Civil War to their mainstream acceptance in the 1970s. Lasner's sweep is impressive: he discusses changing architectural approaches, the impact of legislation and governmental policy (in particular, the role of the Federal Housing Administration), questions of financing and marketing, and the realities of discrimination. (As one long-term co-op resident recalls, there were "no Catholics, Jews, or dogs in those days.")

***The Tribunal: Responses to John Brown and the Harpers Ferry Raid*** (Harvard University Press, 2013) is a collection of documents particularly relevant for an era bookended by Oklahoma City bomber Timothy McVeigh and the Tsarnaev brothers (suspected Boston Marathon bombers). John Brown, too, was a terrorist, and his raid was the proximate cause of the Civil War, the final wedge issue that cleaved the nation. The primary sources here include editorials, speeches, letters, and memoirs, as well as Brown's own writings. Editors **John Stauffer** (AM '04) and **Zoe Trodd** (PhD '09, history of American civilization) contribute a thoughtful introduction, leaving but one question unanswered: can strongly held beliefs ever justify acts of violence?

Most people regard the Hippocratic Oath as a still-relevant ethical standard for physicians. But **Robert M. Veatch** (PhD '71, study of religion) highlights serious shortcomings that make this ancient oath far from suitable for contemporary medicine. In ***Hippocratic, Religious, and Secular Medical Ethics: The Points of Conflict*** (Georgetown University Press, 2012), Veatch places the oath in its Ancient Greek context, recounts its role in medicine over the intervening centuries, and weighs its impact on modern medical practice. He concludes that a religious or secular ethical model would offer more consistent guidance. He also points out that the original Hippocratic Oath doesn't contain the phrase most closely associated with it today, *primum non nocere* — first, do no harm.

In the vast scholarship on the Civil War, **Michael David Cohen** (PhD '08, history) reports, no one has explored its impact on higher education. Cohen's ***Reconstructing the Campus*** (University of Virginia Press, 2012) is thus a reconnaissance of new territory. Accordingly, it combines a broad overview with limited, deeper exploration via seven case studies, a regionally balanced set of colleges (that also includes Northern and Southern "female academies"). Cohen finds that Southern colleges were more gung-ho and less critical of the Confederate cause than Northern ones were of the Union. He also notes significant changes catalyzed by the war, including a shift to more practical and professional curricula, as encouraged by the 1862 Morrill Land-Grant College Act, and stepped-up state funding of public universities.

***The Death and Life of Main Street*** (University of North Carolina Press, 2012) examines the American small town as place and cultural or political trope ("Main Street" versus "Wall Street"). **Miles Orvell** (PhD '70, English) lays out the forces arrayed against Main Street — interstate highways, suburban growth, shopping malls, and "big-box stores." Yet as Americans abandoned — and even satirized — the small town, they retained certain core small-town values. Orvell's narrative draws on literature (Sinclair Lewis's *Main Street*, Thornton Wilder's *Our Town*); film (*It's a Wonderful Life, The Truman Show*); and beyond (the Disney-chartered town of Celebration, Florida, and "living history" sites like Henry Ford's Greenfield Village). He concludes with a look at the New Urbanism, which exemplifies the impact of small-town ideals in contemporary urban planning.

Like his namesake grandfather (of the Pulitzer Prize and *New York World*), Joseph Pulitzer Jr. was a newspaperman, the owner-publisher of the *St. Louis Post-Dispatch*. But he made his name less through journalism than as a patron of modern art. In ***Classic Modern*** (Harvard Art Museums/Yale University Press, 2012), **Marjorie B. Cohn** (AM '61) — the Weyerhaeuser Curator of Prints, Emerita, of the Harvard Art Museums — offers a richly textured biography, particularly in recounting how Pulitzer found his rather unexpected true calling. Pulitzer grew up in St. Louis, gateway to the West and South but no competitor to New York City in the art world. (For example, his father's artistic tastes leaned toward Currier & Ives Americana.)

Interested in art early on, Pulitzer reluctantly concluded that he didn't have the talent to be an artist. Still, he chose to major in art at Harvard, and his embrace of modernism suggests an endearing streak of rebelliousness. Senior Art Department faculty then had little use for modern art; yet Pulitzer chose Picasso as the subject of his senior thesis. Indeed, in the year after his graduation in 1936, he purchased his first six Picassos — the start of a truly notable collection. But Pulitzer was no mere collector. He used the *Post-Dispatch* to educate the public about modern art and, by serving on numerous visiting committees, advocated for it at Harvard.

THE HUMAN QUEST TO FIND, KEEP, MANAGE, AND DEFY OUR MOST LIMITED RESOURCE

# SIGNS OF THE TIME

*BY BARI WALSH / PHOTOGRAPHS BY BRUCE PETERSON*

Imagine what it must have been like to live fully in the present, when the ephemera of our lives couldn't be contained on film, or in jpegs, when memories or mundanities couldn't be posted, liked, or preserved for posterity. When posterity as we know it didn't exist. When sounds couldn't be packaged, looped, mashed up, downloaded.

Surrounded by images, just a click away from your first favorite band's first concert in that dive in Athens in '79, it's almost shocking to confront the natural history of time before we captured it — one of the many fascinating points of departure for a new exhibition on time at Harvard's Collection of Historical Scientific Instruments.

For the vast part of our history, experiences happened and then stopped. The scene changed, the image dispersed, the sound faded.

The arrival of the phonograph, the invention of the camera — these tools did more than give us a chance to preserve events and performances, argues this new exploration of how science and culture shape our notions of past, present, and future. They profoundly altered our notions and experience of time itself.


Flowered phonograph horn, Edison Manufacturing Company, New York, c. 1904; portable orrery, Peter & John Dollond, London, ca. 1787; ivory diptych sundial, Joseph Ducher, Nuremberg, 1640-1644; Paradoxides Acadoparadoxieds harlani (trilobite), Braintree, Massachusetts, Museum of Comparative Zoology, Harvard University; and "Swinger" instant camera belonging to Edwin Land. All Collection of Historical Scientific Instruments, Harvard University, except as noted.

# SIGNS OF THE TIME

The materiality of museum objects is grounding, reassuring — time-defying, even when time itself is the theme. Indeed, continuity is one of the narratives that emerges most persuasively from the imaginative, discipline-spanning exhibition assembled by Sara Schechner, PhD '88, the David P. Wheatland Curator at the Collection of Historical Scientific Instruments (CHSI). In its modest gallery space on the second floor of the Harvard Science Center, *Time and Time Again* tells a story as vast as history — and as intimate as your baby's first step.

The exhibit showcases more than 300 objects, drawn from a diverse range of Harvard museums and libraries, that suggest the profundity of time and the inescapability of its limits, while conjuring the ordinary, enduring markers of time's passage — seasons, milestones, rituals, schedules, and lists that have organized our lives for centuries.

The eclectic composition — as Schechner says, it's an exhibit about time with hardly a clock to be seen — is an apt representation of the scholarly aspirations of the people who manage CHSI, which falls under the stewardship of the Department of the History of Science and has become closely tied to that department's teaching and research mission.

***"DO YOU THINK OF TIME AS CYCLICAL — AS IN THE CHICKEN AND EGG CONUNDRUM — OR LINEAR, LIKE THE TIMER ON A STOPWACH?"***

With more than 20,000 objects in its holdings, the collection is among the world's largest such, certainly the largest in North America, says director of administration Jean-François Gauvin, PhD '08. In its willingness to creatively mine its holdings, and to mount exhibitions that draw upon the rich resources of Harvard as a whole, CHSI is the pioneer of a strategy that has lately been embraced by the Faculty of Arts and Sciences, which last year announced the creation of the Harvard Museums of Science and Culture. This new consortium of six FAS museums (hmsc.harvard.edu) has a cumulative holding that exceeds 28 million objects, representing the history, life, and cultures of Earth. Last December, FAS Dean Michael Smith appointed Jane Pickering as the inaugural executive director; she had been deputy director and director of public programs at the Yale Peabody Museum of Natural History and has also played key roles in museums at Oxford and MIT.

Sara Schechner, PhD '88, the David P. Wheatland Curator at the Collection of Historical Scientific Instruments.

JON CHASE/HARVARD STAFF PHOTOGRAPHER

The consortium is about "finding new ways to showcase the collections and to exploit the synergies and strengths of the collections," says Gauvin. "This new umbrella organization will tell the story of Harvard's science museums on a much larger scale, promoting all of the collections better than we could do by ourselves."

And yet for at least a decade, CHSI has found success in doing on a small scale what the new consortium hopes to do more broadly. "With history of science being so interdisciplinary, we've often been comfortable mixing it up," says Schechner. "We're very experienced in bringing things from disparate collections and marshaling them together for research purposes or for telling a story in an exhibition." She jokes that some of her borrowing requests yield confusion from her fellow Harvard curators. In one CHSI exhibition, she recalls, "We borrowed from the Harvard Herbaria to tell a story about Ben Franklin. Now, people don't usually think Franklin . . .seaweed, but he was fascinated with the ocean. His first scientific investigation was during an Atlantic crossing in 1726, when he examined crabs living on sargassum, a seaweed carried north by the Gulf Stream. Forty years later, he would be the first person ever to chart the Gulf Stream. So sargassum was a good place to hang the tale."

It was the same with the new show. As she was reaching out to other campus collections, "they'd say things like, 'Why do you want that belly-button amulet, or the fossil of a trilobite from Braintree? Julia Child's stopwatch — OK, we understand that, it's a stopwatch, but what does a tower of frogs have to do with time, or a mortar and pestle from the Bedouins? Do you really want to borrow all of these things?'

"It wasn't until the exhibition was up that some people who had been scratching their heads finally got it."

CHSI's founding curator, David P. Wheatland, AB '22, would have delighted in these unexpected connections. He knew that the instruments he assembled would tell an extraordinary story about science from the 18th century onward. "When you start reading the stories behind these objects, you see that we have things in this collection that are related to the greatest thinkers in science, from Ben Franklin to Nobel winners — names that are famous through the generations," says Gauvin.

"And they're often related in ways that people don't expect," Schechner adds. "Take William James, for example. People think, William James, philosopher. Well, of course, he was, but in the 1880s he started Harvard's experimental psychology laboratory, and we have instruments from that lab. We can tell the story of why psychology — with its experiments about sensation, perception, and reality — was a science within the philosophy department, until there was a divorce and it achieved its own department in 1934."

# *TIME AND TIME AGAIN*

*SNAPSHOTS FROM THE EXHIBITION*

## TIME AS RITUAL

In the late 19th and early 20th centuries, when a Lakota baby was born, a female relative would make an amulet to hold the umbilical cord — turtle-shaped for girls, lizards for boys. Children wore the amulets around their necks, as a rite of passage, up until they were about 6. *Peabody Museum of Archaeology and Ethnology, Harvard University. Photograph by Samantha van Gerbig/Collection of Historical Scientific Instruments.*

## TIME IN A SERIES

The exhibition suggests that time can be experienced and measured as a forward progression through a series — of developing frogs or of oil lamps from the Early Bronze Age through the modern period. *Frog development series, Rana esculenta, Museum of Comparative Zoology, Harvard University; oil lamps, Semitic Museum, Harvard University. Photograph by Samantha van Gerbig/ Collection of Historical Scientific Instruments.*

## TIME FLOWS

"Universal History Illustrated: or the Stream of Time, made Visible," a time chart by Samuel G. Goodrich, New York, 1841. *Harvard Map Collection.*

## THE BUSINESS OF TIME

Greater Boston was home to two important clockmakers, William Bond & Son, a maker of chronometers and precision clocks, and the American Watch Company of Waltham, which revolutionized the way watches were made. "Their watches were so good — they were not only most precise, they were less expensive — that the Swiss actually counterfeited them," Sara Schechner says. "What goes around comes around." *Collection of Historical Scientific Instruments*

## WORK TIME

The constructs that govern our working lives — the 8-hour workday, the weekend, even the 24-hour day itself — are mostly arbitrary. The length of our day derives from the ancient Egyptian administrative structure, Schechner explains, which split the year into 10-day weeks, with a new bright star rising at the start of each 10-day period. At any given time there were 12 such stars in the sky, which led to the night being divided into 12 hours. Days were similarly divided, for parity. (The division of hours and minutes into increments of 60 came from Babylonians, whose system of mathematics was built on base 60.)

## TIME TRACKING, TOGETHER IN TIME

*Derrah's Official Street Railway Guide for New England, Boston*, circa 1907. Like all timetables, this one helps people synchronize their movements and stay on time.*Baker Library Historical Collections, Harvard Business School.*


## END OF TIME

The exhibit closes with evocations of death, including a display of W. H. Auden's *Funeral Blues*. The first stanza:

> Stop all the clocks, cut off the telephone,
> Prevent the dog from barking with a juicy bone,
> Silence the pianos and with muffled drum
> Bring out the coffin, let the mourners come.

The collection can also tell stories about technology transfer among disparate cultures, about economics and trade, about aesthetics and product design, and about local history, spotlighting figures like Thomas Brattle, Edward Holyoke, and John Winthrop, whose names are more familiarly known as geographical markers than as scientific luminaries.

Wheatland had the insight to see value in objects that others overlooked, and he was able to acquire them for a pittance, relative to their current value. "And he was not just rescuing instruments," says Juan Andres Leon, a history of science PhD candidate who developed a smartphone app called Time Trails that accompanies the exhibit, and who helped set up the collection's online database, searchable from anywhere. "He was also seeing what was happening at Harvard at the time, when Harvard itself was turning from a rather provincial, very good but not globally supreme university, to what it is today. He was part of some of the most important projects happening at Harvard — the Mark 1 computer, the development of radar — and he was collecting things from those projects."

***"WHERE DOES SCIENCE SIT? BY PAYING ATTENTION TO MATERIAL OBJECTS, OR TO THE SOCIAL HISTORY OF SCIENCE, YOU CAN LEARN A LOT ABOUT HOW SCIENCE IS LODGED IN THE LARGER SOCIETY."***

"He had a real knack for understanding what might have research potential later," Schechner adds. "I'm constantly surprised when I look in the collection — Oh, gosh, Mr. Wheatland thought to save this, and to save a series of them. How did he know then that this would be so important later?"

He understood something that also motivates Peter Galison, PhD '83, faculty director of the collection: The value of "the materiality of science" as Galison calls it.

There is no one who more convincingly articulates that value than Galison, Harvard's Pellegrino University Professor, a prolific and boundary-breaking scholar whose work has often been rooted in an exploration of the tangible, the milieu of science and scientists. Now filming a documentary about daily life in a radiation-ruined Fukushima prefecture, Galison has always been curious about "the architecture of the laboratory, the use of space, the forms of evidence, the use of photographs or films as evidence inside the material culture . . . these provide a way of understanding where science has been, in a very literal sense," he says. "Where does science sit? By paying attention to material objects, or to the social history of science, you can learn a lot about how science is lodged in the larger society. And not purely metaphorically."

Pointing to his 2003 book *Einstein's Clocks, Poincaré's Maps*, he says he wanted to explore "what it meant that Einstein worked at a patent office for seven years, and took out his own patents and thought about how to evaluate patents he was being paid for. It's trying to take seriously the work of science, and to see ideas and work and materiality as all bound up together."

Historians of science, he says, "are trying to emplace science, to show how it both fits into the wider culture and also alters that culture. And the first stage is to locate it somewhere." Appreciating science as work makes it more accessible — not by popularizing it, but "by showing how embedded it is in practices that you can understand, that are connected to the world. It isn't just a special handshake and a decoder book that ordinary people have no access to."

Galison likes the juxtaposition that arises from "connecting something incredibly tangible or mundane with the deepest, most abstract ideas — and then standing in a space that lets you feel that connection."

That's as good a description as any of what happens as you enter the CHSI gallery and find yourself staring at a chicken and an egg — and a stopwatch. "I wanted people to think about time and the ways in which we interact with it," says Schechner. "So, do you think of time as cyclical (the chicken and egg conundrum) or linear (like the stopwatch timer) — or do you think of it as a combination, like a clock escapement, where the pendulum turns back on itself and yet propels the hands forward?"

The exhibit contrasts Western notions of time, from creation to end times, with Native American notions, where there is no beginning or end. And it explores what Schechner calls deep time, as symbolized by a trilobite fossil slab she borrowed from Harvard's Museum of Comparative Zoology. It was discovered in Braintree, Massachusetts, on Boston's South Shore — a location now best known to many as the last T stop on one branch of the Red Line.

"These creatures were swimming around Braintree some 510 million years ago," Schechner says, "when that was part of the lost continent of Avalonia." As she recounts, Avalonia eventually drifted and joined with other land masses to make the supercontinent of Pangaea. Millions of years later, as Pangaea broke up to form the Americas, Africa, and Europe, "parts of Avalonia got left in Morocco, Scandinavia, and Massachusetts. This fossil creature, this type of trilobite, is only known in those places, where bits of Avalonia remain."

Schechner sees her assembled objects as multivalent, offering perspectives and connections that go far beyond the obvious. By confronting the trilobite away from its natural history context — by viewing it next to a phonograph, a sundial, the manuscript of a Bach fugue, a domestic calendar, and a baby journal — we can ask ourselves new questions about how these objects help to ground us, offering some sense of permanence over the vastness of time.

# THE 2013 CENTENNIAL MEDALS

*The Centennial Medal is the highest honor awarded by the Graduate School of Arts and Sciences, given annually on the day before Commencement to celebrate the achievements of a select group of Harvard's most accomplished alumni. The medal was first awarded in June 1989, on the occasion of the 100th anniversary of the founding of GSAS. This year's medalists are celebrated on the pages that follow.*

THE 2013 CENTENNIAL MEDALS

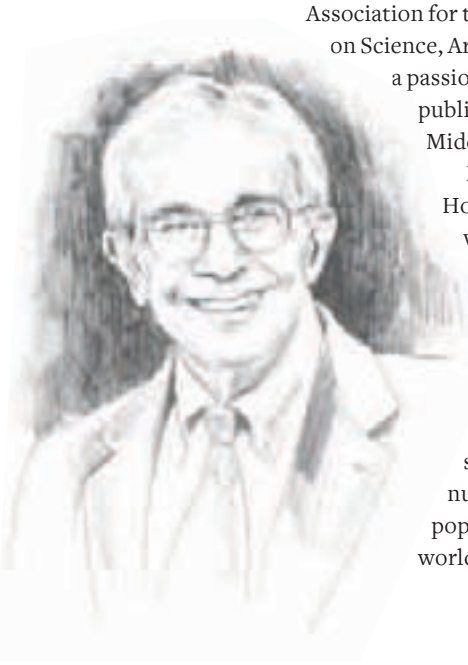
PhD ’60, HISTORY OF SCIENCE

# EVERETT MENDELSOHN

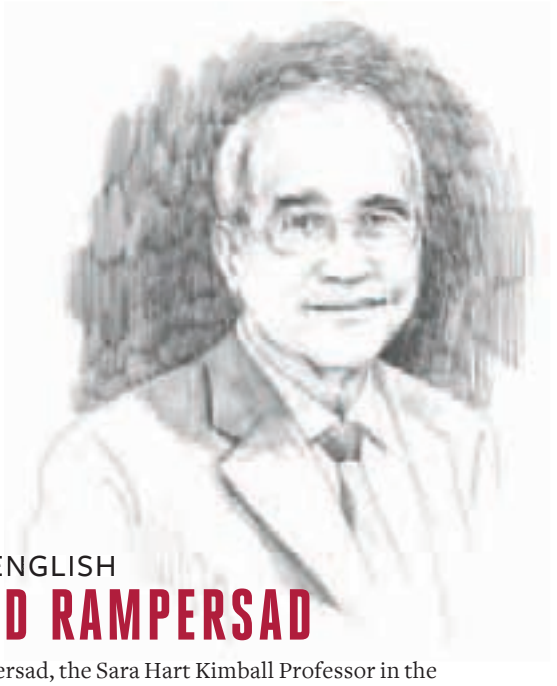
“Possibly no one has done more to establish the history of the life sciences as a recognized university discipline in the United States,” than Everett Mendelsohn, wrote former students Garland Allen (PhD ’66) and Roy MacLeod (AB ’63) in the introduction to the festschrift they published in 2001. And “possibly no one has done more to inspire a critical concern for the ways in which science and technology operate as central features of Western society.”

Indeed, the study of science in its contemporary and historical contexts has always carried with it something of a moral obligation for Mendelsohn, Emeritus Professor of the History of Science at Harvard, where he has been on the faculty since 1960. Whether in his assessment of what science owes to the world, or what he owes to his colleagues, students, and friends, Mendelsohn has been that rare pioneer who is not too busy *pioneering* to think about the world beyond his scholarly pursuits.

At Harvard, in the fledgling history of science department, he founded the *Journal of the History of Biology*, thereby essentially inventing that subfield. He went on to explore the social and sociological history of science, and he founded — among other initiatives — the American Association for the Advancement of Science’s Committee on Science, Arms Control, and National Security. He is a passionate advocate of nuclear disarmament, public responsibility in genetics research, and Middle East peace and reconciliation efforts.



He is also the former Master of Dudley House, the GSAS graduate student center, where he made graduate advising a centerpiece of his activity. It is only fitting that the Graduate Student Council named its annual mentoring award in his honor, says Anne Harrington (AB ’82), the acting chair of the history of science department: “Everett Mendelsohn himself set the standard, not only training but personally nurturing generations of students who now populate leading departments around the world.”



PhD ’73, ENGLISH

# ARNOLD RAMPERSAD

Arnold Rampersad, the Sara Hart Kimball Professor in the Humanities, Emeritus, at Stanford, is widely considered the leading biographer of African American writers and cultural figures, with a body of work that includes essential studies of Ralph Ellison, Langston Hughes, and W.E.B. Du Bois, as well as Jackie Robinson and Arthur Ashe.

How did this native of Trinidad develop the perfect pitch that allowed him to capture the tensions of American writers, the fullness of what it is to be black in America? When Rampersad was awarded the National Humanities Medal in 2010, he gave credit in part to his early education in literature, which, he said, “some people might dismiss as ‘colonial.’ It nevertheless served me well in dealing with the complexities of American biography.”

His work as a biographer began at Harvard, where he wrote his dissertation on W. E. B. Du Bois. He has said that he was drawn to that work because Du Bois changed his life, and the historians who had written about him had not been able to explain why: they missed, he said, “his genuine essence—which is, in my opinion, the grandly poetic imagination he brought to the business of seeing and describing black America and America itself.”

Rampersad brought equal passion to capturing the essence of the other figures he has profiled. His two-volume Hughes biography (1986, 1988) is widely considered definitive, and his 2007 Ellison biography revealed motivations and influences previously uncharted.

“I know of no other scholar who has consistently told stories that matter so deeply to our society as whole,” says Shelley Fisher Fishkin, the Joseph S. Atha Professor of Humanities at Stanford. “Arnold Rampersad has left an indelible mark on our understanding of who we are as Americans.”

ILLUSTRATION: ELISABETH MOCH

PhD ’89, GOVERNMENT

# LOUISE RICHARDSON

Coming of age in Ireland at a time of intense nationalist struggle, Louise Richardson was early on offered a study in how terrorist groups win recruits. Before most people were paying attention, she became a leading authority on terrorism, and the subject has formed the major part of her scholarly interests. But she has become every bit as visionary an administrator as she is a scholar.

Since 2009, Richardson has been the Principal and Vice-Chancellor of the University of St Andrews in Scotland (a title equivalent to that of president at US institutions). At St Andrews — the third-oldest institution of higher learning in the English-speaking world — she embraced as her mandate the notion of honoring tradition while welcoming — and clearing space for — innovation.

It’s not the first time she’s accomplished such a balancing act: In 2001 Richardson became Executive Dean of the Radcliffe Institute for Advanced Study, helping to steer that institution’s transformation into the creative and interdisciplinary research center it is today.

Prior to that, she was an assistant and then associate professor of government at Harvard and the department’s head tutor for 8 years. For years, she taught Harvard’s only courses on terrorism, including her popular undergraduate lecture course Terrorist Movements in International Relations. She is the author of the influential 2006 book *What Terrorists Want: Understanding the Enemy, Containing the Threat*.

“Her intelligence, wit, lucidity, intellectual courage, her dynamism, her gifts of common sense, and her generosity inspired trust and admiration for her rectitude and for her teaching ardor,” says her Harvard mentor, Buttenwieser University Professor Stanley Hoffmann. “Often, when I had some doubts about my direction, or when I lost my patience with mediocrity, or pretentiousness, or ignorance, I was grateful to her for her patience with inevitable imperfections and impatience with pomposity.”

AB ’69, PhD ’76, SOCIOLOGY

# SHERRY TURKLE

Sherry Turkle has been exploring the profound effects of technology on the human psyche since at least as early as 1984, when she published *The Second Self: Computers and the Human Spirit*. That groundbreaking meditation on our relationships with computers opened a rich line of inquiry that grows more evocative by the year.

Turkle is the Abby Rockefeller Mauzé Professor of the Social Studies of Science and Technology at MIT, where she founded the Initiative on Technology and the Self, earning a reputation as the leading anthropologist of cyberspace.

“Sherry’s work challenges all of us who work with technology to consider the assumptions we make about the benefits and harms of new tools,” says Ethan Zuckerman, director of the MIT Center for Civic Media.

Her 1995 book, *Life on the Screen: Identity in the Age of the Internet*, began to trace the evolution of a new way of viewing the self — as something decentered, with multiple iterations. In 2009, she released *Simulation and Its Discontents*, an exploration of how simulation and visualization technologies have changed our notions of authenticity.

In recent years, Turkle has become perhaps the leading advocate of moderation in the technological sphere. In her widely acclaimed 2011 book *Alone Together: Why We Expect More From Technology and Less From Each Other*, she worries about the human costs of technology, arguing that we are choosing omnipresent connection over conversation and real relationships.

“When other people saw computers primarily as technologies, Sherry Turkle saw them as vehicles through which we made sense of our own identities (our second self), through which we defined our own cultures, and around which we negotiated our relationship with each other,” says Henry Jenkins, Provost’s Professor of Communication, Journalism, and Cinematic Arts at the University of Southern California.

# A Welcome Sight

**Alumni Day 2013 brings the GSAS community together**

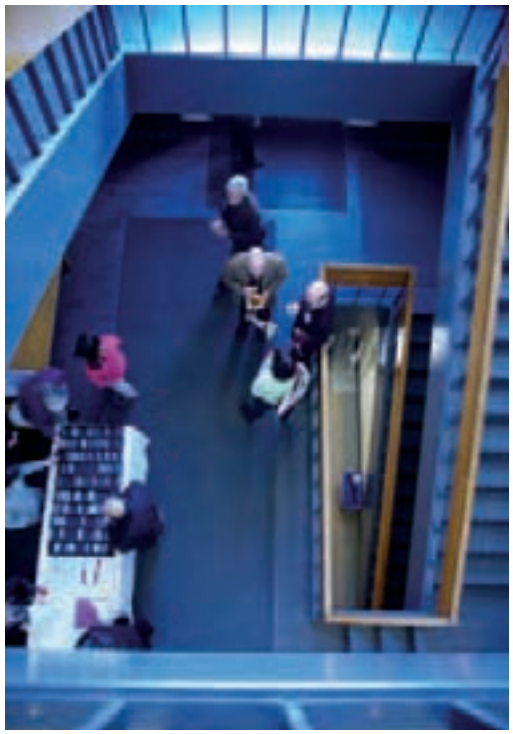
Jennifer Sheehy-Skeffington, a PhD student in psychology, chats with alumni at the Faculty Club.

PHOTOGRAPHER
Kent Dayton

Headlined by Professor and former FAS dean William Kirby, this year's Alumni Day generated record numbers, with close to 300 alumni in attendance. It is an event that has become a beloved tradition, offering attendees the opportunity to reengage with the vibrant intellectual life of the Graduate School and to reconnect with friends and colleagues.

In his morning address, Kirby, PhD '81 — one of Harvard's foremost scholars on China, and the driver behind the University's new Asia hub, Harvard Center Shanghai — considered China's business, economic, and political development in an international context, sparking questions from the audience on China's increasingly significant role in the world economy. The discussion continued over lunch at the Faculty Club.

Six faculty members led afternoon symposia , on subjects ranging from genes and natural selection to the sociology of the city, from FDA policy to the plays of Oscar Wilde.



Keynote speaker
William Kirby

PhD student Ruoki Hu

Mable Chan asks a question after the keynote.

Professor George Church

Professor Hopi Hoekstra

Alumni Council member John Moon, left, with Melaku Muluneh.

PHOTOGRAPHER
Kent Dayton

Sara Seager

Charles Alcock

Irwin Shapiro

Avi Loeb

Ramesh Narayan

# STARGAZING WITH ASTRO NOMY

Bob Kirshner

Brian Schmidt

Joe Taylor

Heather Knutson

Dave Charbonneau

Jim Moran

## Exploring origins both cosmic and academic at a reunion of graduate alumni

GSAS was proud to welcome more than 100 alumni from across the globe for a celebration of Harvard Astronomy on April 5. The day presented rich opportunities to engage with some of the leading research in the field, celebrate new discoveries, and connect with colleagues and current students.

The program began in Phillips Auditorium at the Department's Garden Street home base, with an alumni-led career panel for current students, sponsored by the Graduate School Fund and focusing on nonacademic pathways. Then faculty and students took the floor to summarize new research in the department and to introduce students' wide-ranging mentoring and professional development activities.

Later, alumni, students, and faculty reconvened in the Sheraton Commander Hotel for a celebratory luncheon followed by panel discussions exploring two of the department's core areas of strength: the nature of the universe ("Testing Einstein's Theory of Gravity") and extra-solar planets and life.

These conversations — featuring faculty and alumni who are key contributors to research in these areas — provided the assembled audience with an uncommonly intimate glimpse of a field that is brimming with energy and optimism.

As reported by the *Harvard Gazette*, the first panel featured interconnections among some of the field's foundational figures. One of the two Nobel laureates on the panel was Brian Schmidt, "who received his PhD in 1993 and won the Nobel Prize in physics in 2011 for work showing that the universe is expanding at an accelerating rate. (He's now at the Australian National University.) Schmidt's adviser, Clowes Professor of Science Robert Kirshner, was also on the panel and, in his remarks, recalled taking a freshman seminar for which Joe Taylor, the panel's second Nobel laureate, was the teaching fellow. Taylor, an emeritus professor at Princeton, received his PhD from Harvard in 1968 and won the Nobel Prize in physics in 1993 for discovering the first pulsar in a binary system, which could be used to study gravity."

The *Gazette*'s report continued, "Taylor said he was able to use the pulsar to observe what is called the 'Shapiro delay,' a delay that light experiences when it passes close to a very massive object. The delay was predicted by Einstein in his theory of general relativity and first observed in 1977 by the panel's moderator, Timken University Professor Irwin Shapiro."

The second panel was energized by the nearly contemporaneous announcement that NASA had agreed to launch the TESS satellite, "for which panel member David Latham, PhD '70, is the chief mission scientist ," reported the *Gazette*. "After its launch in 2017, TESS — the Transiting Exoplanet Survey Satellite — will scan the sky for planets transiting bright nearby stars, which would allow study of atmospheres for chemical signatures of life."

'We're here at a very special time in the history of astronomy,' Latham said. 'We are poised to discover and characterize worlds like Earth, where life as we know it would be comfortable.'"

## The 362nd Harvard Commencement

"Harvard Commencement thus remains a singular commingling of solemnity and festivity, tradition and modernity," writes Marvin Hightower, AB '69, in a rich explication of the traditions of Morning Exercises (find it at harvard.edu/spirit-commencement).

This year was all that. GSAS's new dean, Xiao-Li Meng, who earned his own PhD in this Yard in 1990, told the assembled crowd that he had assuaged his first-timer's nerves with thoughts of winning a hug from Commencement speaker Oprah Winfrey if he delivered his lines just right. He did — and she did, bestowing the first in a series of embraces she would give to Harvard deans that morning.

# ANCIENT AND UNIVERSAL — *WITH A STANDING*

President Faust handled the tradition, rising from her chair at the back of the stage to confer the degrees — as always, shining the light first on GSAS, to reflect the central role of the PhD (and of the Faculty of Arts and Sciences) at Harvard. She welcomed the PhD candidates "to the ancient and universal company of scholars," upon which wild cheers from those newly welcomed soon erupted.

Later in the morning, Meng and the GSAS degree candidates reunited at Sanders Theatre, where, in a speech punctuated by laugh lines, Meng advised the candidates to accept the responsibility that will come with their new authority, to cultivate empathy, and to find — and become — a good mentor. He raised a virtual toast to all they'd achieved and would achieve, and soon, after candidates from A to Z (or, in this case, from African Studies to Urban Planning) had their degrees in hand, everyone set off to enjoy the real thing at GSAS's annual champagne luncheon.

*– Bari Walsh / Photos by Martha Stewart*

EDITOR
Emma Mueller

# Noted

## Applied Physics

**Edward E. Altshuler, PhD '60**, has published, *The Rise and Fall of Air Force Cambridge Research Laboratories* (CreateSpace, 2013). The work chronicles the 66-year history of the Cambridge lab, which evolved after World War II from radiation laboratories at Harvard and MIT and grew to become one of the leading research labs in the world. Altshuler began working there in 1960 and later became chief of the Propagation Branch. He remained with the institution for more than 40 years.

## Biology

Macalester College has granted tenure status to **Sarah Boyer, PhD '07**, associate professor of Biology. Boyer has been on the Macalester faculty since 2006 and currently teaches Biodiversity and Evolution, one of the courses in the department's core sequence, in addition to upper-level courses in biogeography, evolution, and biodiversity. Her research focuses on the diversity and evolution of animal life.

## Biophysics

**Mark Andermann, PhD '06**, has received a three-year, $300,000 award from the Smith Family Awards Program for Excellence in Biomedical Research, a program that seeks to help launch the careers of biomedical researchers in Massachusetts. Andermann is an assistant professor of medicine at Harvard Medical School and an investigator in the Division of Endocrinology, Diabetes, and Metabolism at Beth Israel Deaconess Medical Center.

## Chemistry

**Rebecca Sansom, AM '05**, has been selected as an Albert Einstein Distinguished Educator Fellow for 2013–2014 — a paid fellowship for K-12 science, technology, engineering, and mathematics educators with demonstrated excellence in teaching. Sansom is a teacher at Bingham High School in South Jordan, Utah.

## Comparative Literature

**Deborah Heller, PhD '70**, has published, *The Goose Girl, the Rabbi and the New York Teachers* (iUniverse, 2013), part memoir, part historical narrative that explores significant moments in Jewish and American history from seventeenth-century Europe to twentieth-century America through the eyes of Heller's forbearers.

## Economics

**Raj Chetty, AB '00, PhD '03**, whose research was cited in President Barack Obama's 2012 State of the Union address, has been awarded the John Bates Clark Medal. The award honors "that American economist under the age of forty who is judged to have made the most significant contribution to economic thought and knowledge." Chetty is professor of economics at Harvard.

**Richard Grossman, AB '82, PhD '88**, a professor of economics at Wesleyan University and a visiting scholar at Harvard's Institute of Quantitative Social Science, has been named a 2013 Fellow by the John Simon Guggenheim Memorial Foundation. Grossman is the author of *Unsettled Account: The Evolution of Commercial Banking in the Industrialized World since 1800* (*Princeton University Press, 2010*) *and WRONG: Nine Economic Policy Disasters and What We Can Learn From Them* (forthcoming from Oxford University Press).

## English

**Brigitte Bailey, PhD '85**, has co-edited a volume of essays, *Margaret Fuller and Her Circles* (University of New Hampshire Press, 2013), which emerged from a conference at the Massachusetts Historical Society marking the bicentennial of this 19th-century public intellectual. Bailey has also co-edited *Transatlantic Women: Nineteenth-Century American Women Writers and Great Britain* (University of New Hampshire Press, 2012), a collection of essays.

## THE GOOD BOOK

As an undergraduate in Quincy House, **Brian Palmer** (AB '86, PhD '00) read a *New York Times* story about a young man who had died trying to protect the rights of indigenous Brazilians. Wanting to remember his name, Palmer wrote it on a piece of paper taped to his wall, and soon began listing more people who had died taking great risks for others. Now a social anthropologist at Uppsala University in Sweden, Palmer has gathered 365 of those names into the *Raoul Wallenberg Calendar*, a pocket-sized planner dedicating every day of 2013 to people who risked all in the service of a good cause.

People like Swedish diplomat Wallenberg, whose entry on August 4 (he was born that day in 1912) describes how, as the Swedish legation in Budapest, he helped save thousands of Hungarian Jews from the Holocaust.

Palmer's "calendar of civic courage" was commissioned and published by the Living History Forum, a public authority in Sweden dedicated to promoting tolerance, democracy, and human rights. The calendar is being distributed for free to Swedish high-school students, and editions in English and Korean, among other languages, have been produced. It is also being serialized with daily segments on Radio Sweden. — *Nicholas Nardini*

Share your news. Send a note to gsaa@fas.harvard.edu, or write to *Colloquy*, Holyoke Center 350, 1350 Massachusetts Avenue, Cambridge, 02138.

**Jennifer Goodman Wollock, AB '74, PhD '81**, has published *Rethinking Chivalry and Courtly Love* (Praeger, 2011). It examines the multicultural roots of those topics and explores their interaction in history and literature from the Middle Ages to the present, from Gilgamesh and the Bible to contemporary gender relations and international laws of war. Wollock is a professor of English at Texas A&M University.

### Government

Best known for his research on social welfare and race and politics in America, political scientist **Robert C. Lieberman, PhD '94**, has been named the 14th provost and senior vice president for academic affairs at The John's Hopkins University. Lieberman comes from Columbia University, where he has been a member of the faculty since 1994.

In recognition of his scholarship and numerous contributions to his field, **Robert J. Lieber, PhD '68,** has received the 2013 Career Research Achievement Award from the Graduate School at Georgetown University. Lieber is Professor of Government and International Affairs at Georgetown, where he previously served as chair of the Government Department and interim chair of Psychology.

### History

In *Declining Prospects: How Extraordinary Competition and Compensation Are Changing America's Major Law Firms* (CreateSpace, 2012), author **Michael H. Trotter, AM '59, JD '62**, offers an in-depth analysis of the legal services industry in America and its growth from World War II to the present. Trotter is also the author of *Profit and the Practice of Law: What's Happened to the Legal Profession* (CreateSpace, 2012) and more than 20 articles and essays published in the *American Bar Association Journal*, the *National Law Journal* and the *Daily Report*.

### Landscape Architecture

*Design Intelligence* has included **Allan W. Shearer, MLA '94, PhD '03**, on their 2013 list of the 30 Most Admired Educators. The citation reads, "Shearer brings a rare combination of interests to the design professions and an intellectual depth that is leading the discipline of landscape architecture into new territory in environmental security." He teaches at The University of Texas at Austin.

### Philosophy

When **Daniel Callahan, PhD '65**, decided to apply his training in philosophy to ethical issues in biology and medicine 40 years ago, he pioneered the field of bioethics. In his latest memoir, *In Search of the Good: A Life in Bioethics* (MIT Press, 2012), Callahan describes the journey and offers his take on a number of today's most relevant issues. He is Research Scholar and President Emeritus of the Hastings Center, a nonpartisan bioethics research center.

### Psychology

**Neil Kressel, PhD '83**, has published *The Sons of Pigs and Apes: Muslim Antisemitism and the Conspiracy of Silence* (Potomac Books Inc., 2012). Parts of the book were written while he was a visiting associate professor at the Yale Initiative for the Interdisciplinary Study of Antisemitism. In 2011, Kressel received the Tikkun Olam Award from the Haiti Jewish Refugee Legacy Project for his work on the foundations of Jew-hatred in the Muslim world.

### Regional Studies–East Asia

**Mable Chan, AM '93**, has launched, *China Personified* (www.chinapersonified.com), a multi-media content development and production company seeking to connect young people, both American and Chinese, with personal ties or interest in China. The goal is to promote cultural understanding and collaboration between China and the United States, and to foster a community of global-minded leaders. Chan has worked as a producer for over 20 years at major US television networks, including *ABC, NBC, CBS, CNN* and *Fox*.

# Aquinas in a Lexus

## and other creative liberties

After studying creative writing at Princeton, **Douglas Trevor** (PhD '99) continued producing short stories even as he began a PhD in renaissance literature at Harvard, eventually collecting several in *The Thin Tear in the Fabric of Space* (Iowa, 2005). Now a professor of English at the University of Michigan, he just published his first novel, *Girls I Know* (SixOneSeven Books, 2013), about a Harvard grad-school dropout coping in the aftermath of a shooting in a Boston restaurant.

**Your field is English literature of the early modern era. Does this inform your fiction?**
With *Girls I Know* I wanted to write a sort of theodicy, an attempt to justify the ways of God to man. So of course from my period *Paradise Lost* is a great theodicy, *King Lear* is a great theodicy. But its real frame is more medieval; I was thinking of Aquinas, whom one of the novel's characters is reading. I'm interested in the idealism and naiveté of the medieval account of evil — does it have any purchase nowadays?

**As a professor-novelist, does your fiction tend to be on the bookish side?**
I'm very self-conscious and nervous about that; my agent didn't think she could sell a novel that included Aquinas making a cameo in a 20-year-old's Lexus. So I took it out, but eventually I put it back in. And now I'm writing about Detroit, and thinking a lot about the Frankfurt School — how can I get a character who cares about the Frankfurt School and lives in Detroit? But you don't have to be an academic to care about cultural materialism; if you live in Detroit you're surrounded by it. Through fiction, these intellectual questions can become absolutely accessible.

**So maybe your two modes — academic, novelist — aren't so different?**
I think that as the humanities get smaller, people are going to be asked to do more, and a lot of basically artificial boundaries are going to dissolve. The interest of our students is going to increasingly be in modes of self-expression, as well as modes of learning traditionally defined. We're going to see a lot more cross-fertilization between academic and creative pursuits. — *Nicholas Nardini*


Meredith Fisher, HGWISE Mentor of the Year

## MENTORING COMES HOME

The increasingly popular mentoring program run by Harvard Graduate Women in Science and Engineering capped off a successful year with a dinner on May 8 to honor Meredith Fisher as its Mentor of the Year. Fisher received her PhD from Harvard in organismic and evolutionary biology in 2007 and then an MBA from MIT's Sloan School of Business. She now leads business development for Ginkgo BioWorks, a career path that made her an ideal match for mentees Laura Strittmatter and Miriam Huntley, PhD students who wanted to learn more about possible careers outside of academia.

"From our first meeting, Meredith started connecting me to numerous ex-PhD friends and acquaintances who have pursued a variety of 'nontraditional' career paths. Without Meredith, I never would have met these people and been able to appreciate the wide variety of options available for PhD scientists," wrote Strittmatter in her nomination.

For Fisher, becoming an HGWISE mentor was something of a homecoming: she was one of HGWISE's founders while at Harvard. The mentoring program was launched after she graduated, but mentoring was an area that Fisher said was "discussed extensively when [we] were establishing HGWISE and the programs that would comprise it." She approaches mentoring as a facilitator, saying, "I felt my role was to understand what my mentees wanted to gain from the program and then do what I could to facilitate or provide it by tapping into my network, my own experiences, or my professional connections."

The HGWISE mentoring program has grown from 27 mentors and 42 mentees in 2008–2009 to 78 mentors and 113 mentees this year. The program is seeking to recruit new mentors from among the ranks of Harvard faculty and Boston-area alumnae. See www.hgwise.org for details. — *Amy Gilson*

## HONORING A CHAMPION OF DIVERSITY AT HARVARD

Few people at Harvard did more to promote diversity in the sciences than Jocelyn Spragg, PhD '69, who died in 2010. Her legacy was celebrated with a lecture and career panel at Longwood on April 12, the first of what will be an annual series sponsored by the PhD student group Minority Biomedical Scientists of Harvard (MBSH).

As faculty director of diversity programs and special academic resources in the Division of Medical Sciences at Harvard Medical School, Spragg developed one of the premier summer research programs in the country, the Summer Honors Undergraduate Research Program (SHURP), and created the MBSH group.

Gentry Patrick, PhD '00, associate professor of biology at the University of California San Diego, delivered the Inaugural Jocelyn Spragg Lecture. He also took part in the career panel, with Dodzie Sogah, AB '01, PhD '08, associate director of business development at Vertex Pharmaceuticals; Josef Kurtz, PhD '02, associate professor of biology at Emmanuel College; and Rafael Luna, a research fellow at HMS and founder of Luna Scientific.


PhD alumni Dodzie Sogah, Josef Kurtz, and Gentry Patrick

## NAVIGATING THE NONACADEMIC PHD PATH

As always, a large contingent of students turned out to hear about the career pathways of GSAS alumni in nonacademic fields, at the 2013 rendition of Leveraging Your PhD in the Workplace, an annual program sponsored by the Office of Career Services and GSAS. Among the dozen panelists were (from left) Oana Dan, PhD '12, sociology, a research scientist at Nielsen; Yota Batsaki, PhD '02, comparative literature, executive director of Dumbarton Oaks Research Library and Collection; and Joseph Koipally, PhD '01, biochemistry, an associate at the intellectual property firm Fish & Richardson.

**The Graduate School Alumni Association**
Governed by its Alumni Council, the GSAA represents and advances the interests of alumni of the Graduate School of Arts and Sciences by sponsoring alumni events and by publishing *Colloquy* three times each year.

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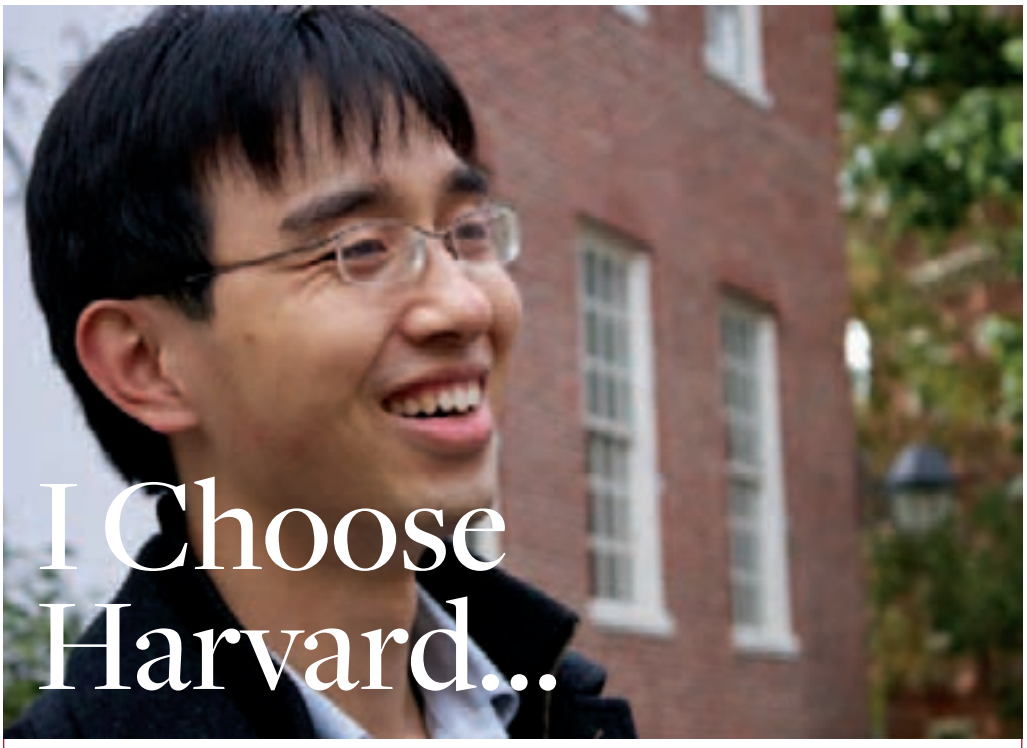

# I Choose Harvard...

Born in Beijing, China, **Le Cong** came to Harvard in the summer of 2009, eager to immerse himself in biological and biomedical sciences. Le is a PhD student in the Division of Medical Sciences — part of an interfaculty program that connects the Graduate School of Arts and Sciences (GSAS) and Harvard Medical School. He hopes his research will eventually aid in diagnosis and treatment for diseases such as autism, depression, bipolar disorder, and schizophrenia.

Upon his arrival on campus, Le took advantage of GSAS's intensive four-week English Language Program (ELP) as a means to improve his English, discover more about the Harvard community, and ultimately achieve his best work. Through the program, he lived with peers in GSAS housing and participated in a curriculum that focuses on reading and speaking English and on American culture.

"At Harvard, it's critical for graduate students, particularly foreign graduate students, to connect to the broader community," says Le. "The ELP integrates so many fantastic elements into one program, providing perspective on the culture, history, and spirit of Harvard and Boston."

Le credits the ELP with kick-starting his scholarly success and helping him to adjust. He also says the program was key to his social support at Harvard — he formed friendships through the ELP "that will last a lifetime."

"The program provided me with a sense of membership within the Harvard community and great preparation for life in the U.S.," says Le. "I established a strong network of peers from around the world and planted the seed for future academic collaboration."

Le continues to thrive at Harvard. In 2011, he was one of only 48 international students across the country to be awarded a prestigious new fellowship from the Howard Hughes Medical Institute, which fully funds exceptional international students in the sciences. In 2012, as part of his PhD thesis, Le joined the lab of George Church and Feng Zhang, where he continues to pursue his research.

"I benefitted tremendously from the ELP — more than I ever would have expected," says Le.

Unrestricted gifts to the Graduate School Fund support programs like the ELP, enabling GSAS to attract and nurture the brightest minds from around the world. To make a gift in support of graduate students through resources like these, visit alumni.harvard.edu/gsas.

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**Stagecraft**
In the capstone of their graduate careers, departing students receive the congratulations of Harvard faculty, gathered on stage at Sanders Theatre for the GSAS Diploma Awarding Ceremony.
*Photograph by Martha Stewart*